CLAIMS:

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- 1. Polycrystalline alumina components with an additive of at least 0.001 wt-% ZrO_2 and optionally containing MgO in a concentration of at most 0.3 wt-% characterized in that the alumina contains at most 0.5 wt-% ZrO_2 as an additive and has an average crystal size $\leq 2 \mu m$, and a relative density higher than 99.95 % with a real in-line transmission RIT \geq 30 % measured over an angular aperture of at most 0.5° at a sample thickness of 0.8 mm and with a monochromatic wavelength of light λ .
- 2. Polycrystalline alumina components according to claim 1, characterized in that the average crystal size is $\leq 1 \mu m$ and the real in-line transmission RIT is at least 40 %.
- 3. Polycrystalline alumina components according to claim 1 or 2, characterized in that the ZrO₂ additive is in a concentration from 0.1 wt-% to 0.3 wt-%, inclusive.
- 4. Discharge lamp characterized in that the lamp is provided with a discharge tube having a wall of a ceramic as claimed in any one of the preceding claims.
 - 5. Lamp according to claim 4 characterized in that the discharge tube has an ionisable filling containing a metal halide.
- 6. Method for forming a polycrystalline alumina component as claimed in any one of the preceding claims characterized in that the process includes the steps of
 - preparing a slurry of corundum power with a mean grain size $\leq 0.2 \mu m$,
 - adding a dopant, selected from zirconia and a zirconium containing precursor,
 - casting the slurry in a mould,
- 25 drying and sintering of the moulded body thus formed, and
 - performing a HIP treatment at a temperature of at least 1150 °C for at least 2 hours.

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- 7. Method according to claim 6, wherein the dopant is added as finely grained ZrO₂.
- 8. Method according to claim 6 or 7, wherein the finely grained ZrO₂ dopant has
 5 an average particle size of at most 100 nm.
 - 9. Method according to claim 6, 7 or 8, wherein after the addition of the zirconia dopant the prepared slurry is slip cast in a mould.
- 10 10. Method according to claim 6, 7 or 8, wherein after the addition of the zirconia dopant the prepared slurry is gel cast in a mould.